

Location: Marshall County, WV Slot: 810H
 Field: Marshall WV Well: Charles Jamison MSH 810H
 Facility: Charles Jamison MSH Pad Wellbore: Charles Jamison MSH 810H AWB

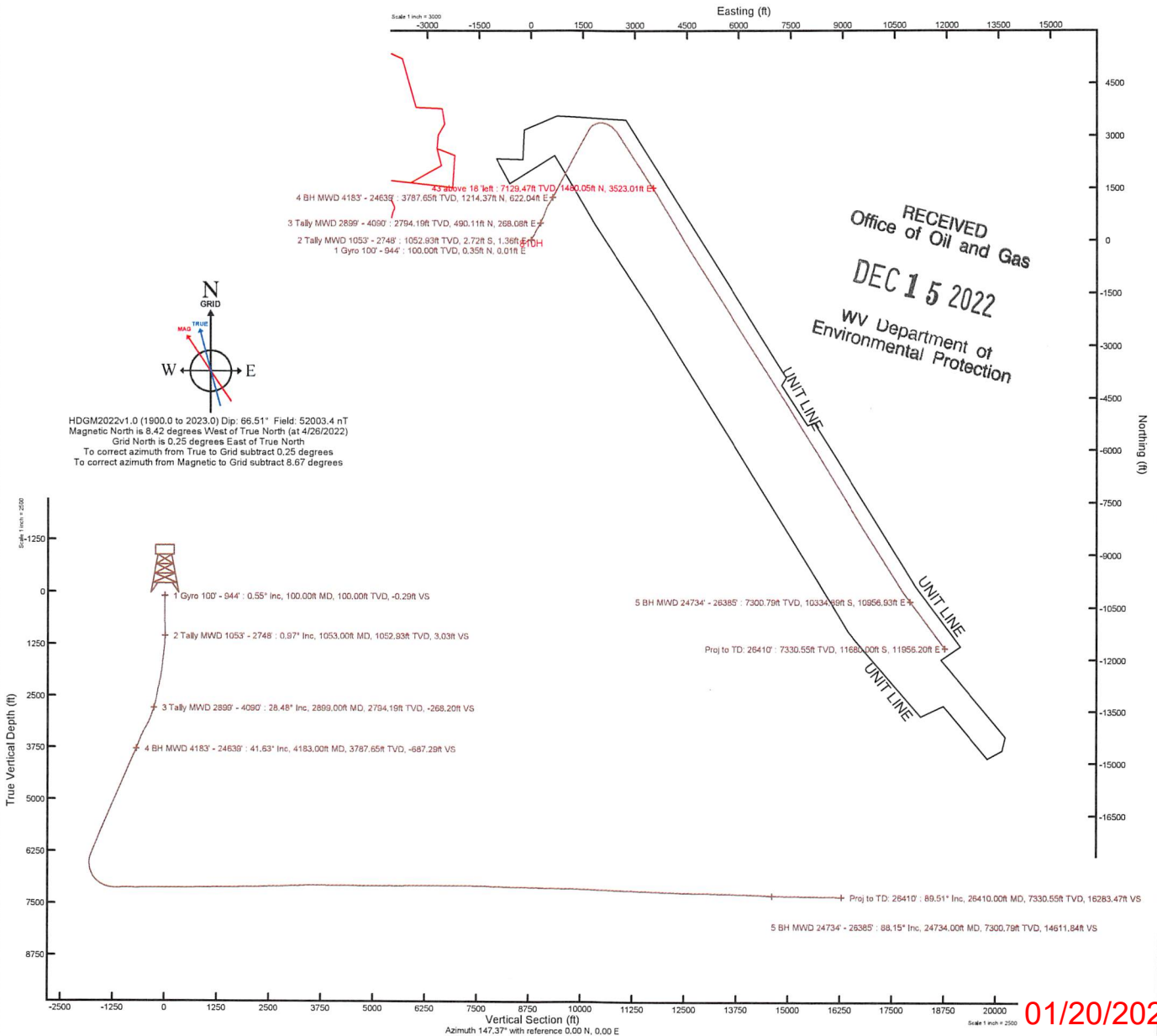
Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Charles Jamison MSH Pad			1750638.500	14451211.924	39°47'30.9700"N	80°36'27.4000"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
810H	-5.45	46.99	1750685.470	14451206.480	39°47'30.9141"N	80°36'26.7984"W
SDC 41 (KB) to Ground level (At Slot: 810H)					26ft	
Mean Sea Level to Ground level (At Slot: 810H)					-1337.2ft	
SDC 41 (KB) to Mean Sea Level					1363.2ft	

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
26410.00	89.510	142.640	7330.55	-11680.00	11956.20	1762637.03	14439531.02	39°45'34.9397"N	80°33'54.3581"W
Plot reference wellpath is Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'							Grid System: NAD83 / UTM Zone 17 North, US feet		
True vertical depths are referenced to SDC 41 (KB)							North Reference: Grid north		
Reference wellpath measured depths are referenced to SDC 41 (KB)							Scale: True distance		
SDC 41 (KB) to Mean Sea Level: 1363.2 feet							Coordinates are in feet referenced to Slot		
Mean Sea Level to Ground level (At Slot: 810H): -1337.2 feet							Depths are in feet		
Offset wellpath MDs are referenced to each path's default MD datum							Created by: tranlam on 2022-06-06; Database: WA_MPL_EASTERNUS_Defn		

API: 47051024270000
BH JOB: 111260161
DURATION: 05.16.2022 to 05.28.2022
RIG: SDC 41



01/20/2023

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999614	Report Generated	6/6/2022 at 11:53:36 AM
Convergence at slot	0.25° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-5.45	46.99	1750685.47	14451206.48	39°47'30.9141"N	80°36'26.7984"W
Facility Reference Pt			1750638.50	14451211.92	39°47'30.9700"N	80°36'27.4000"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 41 (KB) to Facility Vertical Datum	1363.20ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1363.20ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (810H)	26.00ft
MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	147.37°

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION			
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Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations) † = interpolated, ‡ = extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
0.00†	0.000	2.040	0.00	0.00	0.00	0.00	1750685.47	14451206.48	39°47'30.9141"N	80°36'26.7984"W	0.00
26.00	0.000	2.040	26.00	0.00	0.00	0.00	1750685.47	14451206.48	39°47'30.9141"N	80°36'26.7984"W	0.00
100.00	0.550	2.040	100.00	-0.29	0.35	0.01	1750685.48	14451206.83	39°47'30.9177"N	80°36'26.7982"W	0.74
200.00	0.310	4.930	200.00	-0.90	1.10	0.05	1750685.52	14451207.58	39°47'30.9251"N	80°36'26.7976"W	0.24
300.00	0.370	61.880	299.99	-1.09	1.53	0.36	1750685.83	14451208.01	39°47'30.9292"N	80°36'26.7936"W	0.33
400.00	0.560	82.430	399.99	-0.86	1.74	1.13	1750686.60	14451208.22	39°47'30.9313"N	80°36'26.7838"W	0.25
500.00	0.450	85.210	499.99	-0.47	1.84	2.01	1750687.48	14451208.32	39°47'30.9322"N	80°36'26.7726"W	0.11
600.00	0.560	92.810	599.98	0.00	1.85	2.89	1750688.35	14451208.33	39°47'30.9323"N	80°36'26.7613"W	0.13
700.00	1.000	185.410	699.98	0.97	0.96	3.29	1750688.76	14451207.44	39°47'30.9234"N	80°36'26.7561"W	1.17
800.00	1.270	191.880	799.96	2.45	-1.00	2.98	1750688.45	14451205.48	39°47'30.9042"N	80°36'26.7602"W	0.30
900.00	1.010	218.590	899.94	3.52	-2.77	2.20	1750687.67	14451203.71	39°47'30.8867"N	80°36'26.7703"W	0.58
944.00	0.570	221.730	943.93	3.71	-3.24	1.82	1750687.28	14451203.24	39°47'30.8821"N	80°36'26.7753"W	1.00
1053.00	0.970	354.410	1052.93	3.03	-2.72	1.36	1750686.83	14451203.76	39°47'30.8872"N	80°36'26.7810"W	1.30
1142.00	3.080	19.150	1141.87	0.88	0.29	2.08	1750687.54	14451206.77	39°47'30.9169"N	80°36'26.7717"W	2.51
1234.00	6.090	22.430	1233.56	-3.45	7.13	4.75	1750690.22	14451213.61	39°47'30.9844"N	80°36'26.7371"W	3.28
1324.00	9.310	21.910	1322.74	-10.41	18.30	9.29	1750694.75	14451224.78	39°47'31.0946"N	80°36'26.6783"W	3.58
1414.00	12.470	23.560	1411.11	-20.04	33.97	15.89	1750701.35	14451240.43	39°47'31.2491"N	80°36'26.5929"W	3.53
1506.00	15.090	28.800	1500.46	-31.29	53.57	25.63	1750711.09	14451260.03	39°47'31.4424"N	80°36'26.4670"W	3.15
1596.00	15.890	34.410	1587.19	-41.70	74.00	38.24	1750723.69	14451280.45	39°47'31.6438"N	80°36'26.3043"W	1.89
1688.00	14.630	36.210	1675.95	-50.81	93.77	52.22	1750737.67	14451300.21	39°47'31.8386"N	80°36'26.1241"W	1.46
1779.00	15.200	32.080	1763.88	-60.06	113.15	65.35	1750750.79	14451319.59	39°47'32.0295"N	80°36'25.9549"W	1.33
1872.00	17.520	29.770	1853.11	-71.75	135.63	78.77	1750764.21	14451342.06	39°47'32.2511"N	80°36'25.7816"W	2.59
1964.00	15.540	27.460	1941.31	-84.31	158.59	91.33	1750776.77	14451365.01	39°47'32.4775"N	80°36'25.6194"W	2.27
2055.00	15.790	23.810	2028.93	-97.24	180.74	101.95	1750787.38	14451387.15	39°47'32.6959"N	80°36'25.4821"W	1.12
2146.00	19.000	19.850	2115.76	-113.11	206.01	111.98	1750797.41	14451412.41	39°47'32.9451"N	80°36'25.3522"W	3.76
2237.00	22.300	22.240	2200.90	-132.07	235.93	123.55	1750808.97	14451442.32	39°47'33.2404"N	80°36'25.2023"W	3.74
2329.00	25.060	30.100	2285.17	-151.05	268.96	139.94	1750825.35	14451475.33	39°47'33.5661"N	80°36'24.9905"W	4.55
2422.00	25.170	34.720	2369.39	-167.69	302.25	161.08	1750846.49	14451508.62	39°47'33.8942"N	80°36'24.7178"W	2.11
2512.00	26.050	35.230	2450.54	-182.51	334.13	183.38	1750868.78	14451540.48	39°47'34.2082"N	80°36'24.4303"W	1.01
2603.00	26.060	32.900	2532.30	-198.32	367.23	205.77	1750891.16	14451573.57	39°47'34.5344"N	80°36'24.1417"W	1.12

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Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
2693.00	27.400	27.570	2612.69	-216.81	402.20	226.09	1750911.48	14451608.52	39°47'34.8791"N	80°36'23.8793"W	3.05
2748.00	28.270	26.060	2661.33	-229.86	425.12	237.67	1750923.05	14451631.43	39°47'35.1051"N	80°36'23.7297"W	2.04
2899.00	28.480	24.090	2794.19	-268.20	490.11	268.08	1750953.44	14451696.40	39°47'35.7460"N	80°36'23.3365"W	0.64
2993.00	31.260	24.950	2875.69	-293.58	532.69	287.52	1750972.88	14451738.96	39°47'36.1660"N	80°36'23.0850"W	2.99
3085.00	33.290	24.970	2953.47	-319.91	577.23	308.25	1750993.60	14451783.48	39°47'36.6052"N	80°36'22.8170"W	2.21
3176.00	35.910	25.360	3028.37	-347.44	623.99	330.22	1751015.57	14451830.23	39°47'37.0664"N	80°36'22.5328"W	2.89
3268.00	39.070	24.800	3101.36	-377.36	674.70	353.95	1751039.28	14451880.92	39°47'37.5666"N	80°36'22.2260"W	3.45
3359.00	39.610	21.420	3171.75	-409.83	727.74	376.57	1751061.90	14451933.94	39°47'38.0898"N	80°36'21.9332"W	2.43
3451.00	41.530	19.760	3241.63	-445.67	783.76	397.60	1751082.91	14451989.93	39°47'38.6424"N	80°36'21.6607"W	2.39
3541.00	42.290	19.300	3308.61	-482.55	840.41	417.69	1751103.00	14452046.57	39°47'39.2015"N	80°36'21.4000"W	0.91
3633.00	41.570	21.830	3377.06	-519.38	897.97	439.27	1751124.57	14452104.10	39°47'39.7693"N	80°36'21.1203"W	2.00
3724.00	39.980	26.560	3445.98	-551.91	952.16	463.58	1751148.87	14452158.27	39°47'40.3038"N	80°36'20.8058"W	3.82
3814.00	42.440	31.740	3513.71	-579.87	1003.87	492.50	1751177.78	14452209.96	39°47'40.8136"N	80°36'20.4325"W	4.67
3907.00	42.960	31.910	3582.05	-607.06	1057.45	525.75	1751211.02	14452263.52	39°47'41.3417"N	80°36'20.0034"W	0.57
4000.00	41.830	32.330	3650.73	-633.81	1110.56	559.09	1751244.34	14452316.61	39°47'41.8651"N	80°36'19.5733"W	1.25
4090.00	41.410	31.600	3718.02	-659.46	1161.27	590.74	1751275.98	14452367.30	39°47'42.3648"N	80°36'19.1650"W	0.71
4183.00	41.630	29.450	3787.65	-687.29	1214.37	622.04	1751307.27	14452420.38	39°47'42.8882"N	80°36'18.7609"W	1.55
4274.00	41.790	27.890	3855.59	-716.37	1267.49	651.09	1751336.31	14452473.48	39°47'43.4119"N	80°36'18.3858"W	1.15
4364.00	41.740	28.220	3922.72	-745.72	1320.40	679.28	1751364.49	14452526.36	39°47'43.9335"N	80°36'18.0216"W	0.25
4456.00	41.790	27.540	3991.34	-775.89	1374.56	707.94	1751393.13	14452580.51	39°47'44.4676"N	80°36'17.6514"W	0.50
4546.00	41.570	28.140	4058.56	-805.38	1427.48	735.89	1751421.07	14452633.41	39°47'44.9893"N	80°36'17.2904"W	0.51
4637.00	41.590	27.400	4126.63	-835.21	1480.92	764.02	1751449.20	14452686.82	39°47'45.5162"N	80°36'16.9269"W	0.54
4729.00	41.840	28.690	4195.30	-865.19	1534.95	792.81	1751477.97	14452740.83	39°47'46.0489"N	80°36'16.5551"W	0.97
4820.00	41.850	27.980	4263.09	-894.66	1588.38	821.62	1751506.77	14452794.24	39°47'46.5757"N	80°36'16.1829"W	0.52
4911.00	41.760	28.360	4330.93	-924.25	1641.85	850.26	1751535.40	14452847.70	39°47'47.1029"N	80°36'15.8130"W	0.30
5000.00	41.780	27.860	4397.31	-953.23	1694.15	878.19	1751563.32	14452899.97	39°47'47.6185"N	80°36'15.4522"W	0.37
5090.00	41.570	28.090	4464.53	-982.60	1747.50	906.26	1751591.38	14452952.80	39°47'48.1395"N	80°36'15.0895"W	0.29
5182.00	41.320	27.480	4533.49	-1012.66	1800.87	934.95	1751619.76	14453006.65	39°47'48.6707"N	80°36'14.7228"W	0.52
5272.00	40.820	27.900	4601.34	-1041.94	1853.23	963.12	1751647.22	14453058.99	39°47'49.1869"N	80°36'14.3678"W	0.63
5365.00	40.580	28.870	4671.85	-1071.33	1906.58	991.35	1751676.04	14453112.32	39°47'49.7129"N	80°36'13.9955"W	0.73

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)											
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5458.00	41.620	27.330	4741.93	-1101.23	1960.51	1019.74	1751704.81	14453166.23	39°47'50.2446"N	80°36'13.6236"W	1.56
5550.00	40.940	27.870	4811.07	-1131.37	2014.30	1047.86	1751732.92	14453220.00	39°47'50.7750"N	80°36'13.2603"W	0.83
5643.00	41.240	27.150	4881.16	-1161.80	2068.51	1076.09	1751761.14	14453274.19	39°47'51.3095"N	80°36'12.8956"W	0.60
5735.00	41.480	27.760	4950.22	-1192.12	2122.45	1104.12	1751789.16	14453328.11	39°47'51.8414"N	80°36'12.5334"W	0.51
5826.00	41.660	28.190	5018.30	-1221.75	2175.78	1132.44	1751817.47	14453381.42	39°47'52.3671"N	80°36'12.1675"W	0.37
5919.00	41.590	28.050	5087.81	-1251.94	2230.26	1161.56	1751846.58	14453435.88	39°47'52.9043"N	80°36'11.7914"W	0.13
6011.00	40.330	27.800	5157.29	-1281.58	2283.55	1189.80	1751874.81	14453489.14	39°47'53.4296"N	80°36'11.4265"W	1.38
6100.00	41.150	27.790	5224.72	-1310.25	2334.93	1216.89	1751901.88	14453540.50	39°47'53.9362"N	80°36'11.0765"W	0.92
6191.00	41.630	27.770	5292.99	-1339.96	2388.16	1244.93	1751929.92	14453593.72	39°47'54.4611"N	80°36'10.7142"W	0.53
6284.00	40.500	27.910	5363.11	-1370.07	2442.18	1273.46	1751958.43	14453647.72	39°47'54.9937"N	80°36'10.3457"W	1.22
6376.00	41.480	28.760	5432.55	-1399.35	2495.30	1302.10	1751987.07	14453700.81	39°47'55.5173"N	80°36'9.9756"W	1.23
6465.00	41.580	28.750	5499.18	-1427.61	2547.03	1330.49	1752015.44	14453752.52	39°47'56.0273"N	80°36'9.6090"W	0.11
6557.00	40.900	27.250	5568.36	-1457.35	2600.57	1358.96	1752043.91	14453806.04	39°47'56.5552"N	80°36'9.2411"W	1.30
6650.00	40.400	29.350	5638.92	-1486.79	2653.91	1387.68	1752072.61	14453859.36	39°47'57.0811"N	80°36'8.8702"W	1.57
6741.00	41.460	28.750	5707.67	-1515.07	2706.03	1416.62	1752101.54	14453911.46	39°47'57.5949"N	80°36'8.4964"W	1.24
6831.00	41.390	28.210	5775.16	-1543.84	2758.37	1445.02	1752129.93	14453963.78	39°47'58.1109"N	80°36'8.1296"W	0.40
6924.00	41.310	27.850	5844.97	-1573.95	2812.60	1473.89	1752158.79	14454017.99	39°47'58.6456"N	80°36'7.7566"W	0.27
7016.00	39.970	29.090	5914.78	-1602.91	2865.28	1502.45	1752187.33	14454070.64	39°47'59.1649"N	80°36'7.3878"W	1.70
7106.00	39.240	29.840	5984.12	-1629.77	2915.23	1530.66	1752215.54	14454120.58	39°47'59.6573"N	80°36'7.0234"W	0.97
7197.00	41.060	28.790	6053.68	-1657.37	2966.39	1559.38	1752244.25	14454171.72	39°48'0.1617"N	80°36'6.6525"W	2.13
7288.00	40.870	28.880	6122.39	-1685.87	3018.65	1588.16	1752273.01	14454223.96	39°48'0.6769"N	80°36'6.2809"W	0.22
7380.00	41.090	28.640	6191.85	-1714.76	3071.55	1617.18	1752302.03	14454276.83	39°48'1.1983"N	80°36'5.9060"W	0.29
7471.00	41.340	29.190	6260.30	-1743.33	3124.03	1646.17	1752331.01	14454329.30	39°48'1.7157"N	80°36'5.5315"W	0.48
7561.00	40.310	29.220	6328.41	-1771.10	3175.39	1674.88	1752359.70	14454380.63	39°48'2.2220"N	80°36'5.1608"W	1.14
7652.00	37.220	38.860	6399.42	-1793.75	3222.56	1706.56	1752391.36	14454427.79	39°48'2.6868"N	80°36'4.7523"W	7.44
7742.00	38.770	50.110	6470.43	-1805.97	3261.88	1745.31	1752430.10	14454467.09	39°48'3.0736"N	80°36'4.2536"W	7.88
7834.00	38.700	60.520	6542.27	-1808.03	3294.54	1792.50	1752477.27	14454499.74	39°48'3.3944"N	80°36'3.6471"W	7.07
7924.00	38.670	64.820	6612.53	-1802.84	3320.35	1842.44	1752527.20	14454525.55	39°48'3.6473"N	80°36'3.0057"W	2.99
8016.00	40.160	70.380	6683.63	-1792.43	3342.55	1896.42	1752581.15	14454547.74	39°48'3.8643"N	80°36'2.3129"W	4.16
8106.00	41.790	82.920	6751.70	-1772.93	3356.00	1953.62	1752638.33	14454561.20	39°48'3.9948"N	80°36'1.5792"W	9.30

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
8198.00	43.150	91.790	6819.62	-1741.89	3358.82	2015.54	1752700.23	14454563.99	39°48'4.0197"N	80°36'0.7857"W	6.67
8288.00	46.750	98.210	6883.34	-1703.03	3353.17	2078.80	1752763.46	14454558.35	39°48'3.9611"N	80°35'59.9756"W	6.43
8379.00	51.110	106.820	6943.17	-1654.37	3338.17	2145.60	1752830.24	14454543.35	39°48'3.8099"N	80°35'59.1205"W	8.59
8470.00	55.560	116.500	6997.58	-1595.13	3311.12	2213.22	1752897.83	14454516.31	39°48'3.5396"N	80°35'58.2557"W	9.83
8560.00	61.430	122.280	7044.62	-1527.38	3273.40	2279.95	1752964.53	14454478.61	39°48'3.1639"N	80°35'57.4029"W	8.51
8651.00	67.550	128.950	7083.83	-1451.16	3225.53	2346.56	1753031.12	14454430.76	39°48'2.6879"N	80°35'56.5522"W	9.43
8741.00	74.430	134.210	7113.14	-1369.34	3169.06	2410.09	1753094.62	14454374.31	39°48'2.1270"N	80°35'55.7415"W	9.43
8831.00	80.790	141.070	7132.47	-1282.79	3104.13	2469.20	1753153.71	14454309.41	39°48'1.4828"N	80°35'54.9878"W	10.26
8922.00	90.460	146.350	7139.41	-1192.38	3031.10	2522.80	1753207.29	14454236.40	39°48'0.7586"N	80°35'54.3053"W	12.10
9014.00	91.290	146.470	7138.00	-1100.40	2954.47	2573.69	1753258.16	14454159.80	39°47'59.9990"N	80°35'53.6577"W	0.91
9105.00	90.000	147.620	7136.98	-1009.41	2878.12	2623.19	1753307.64	14454083.48	39°47'59.2423"N	80°35'53.0279"W	1.90
9197.00	90.920	147.710	7136.24	-917.42	2800.39	2672.40	1753356.83	14454005.78	39°47'58.4719"N	80°35'52.4019"W	1.00
9288.00	89.140	148.000	7136.19	-826.42	2723.34	2720.81	1753405.23	14453928.76	39°47'57.7084"N	80°35'51.7861"W	1.98
9380.00	88.980	146.440	7137.70	-734.44	2646.00	2770.61	1753455.01	14453851.46	39°47'56.9419"N	80°35'51.1525"W	1.70
9472.00	90.860	146.630	7137.83	-642.45	2569.26	2821.34	1753505.72	14453774.74	39°47'56.1812"N	80°35'50.5069"W	2.05
9565.00	91.380	148.750	7136.01	-549.48	2490.68	2871.04	1753555.39	14453696.19	39°47'55.4024"N	80°35'49.8748"W	2.35
9658.00	89.750	147.410	7135.09	-456.49	2411.75	2920.21	1753604.54	14453617.29	39°47'54.6202"N	80°35'49.2494"W	2.27
9749.00	90.430	146.470	7134.95	-365.50	2335.48	2969.85	1753654.16	14453541.06	39°47'53.8643"N	80°35'48.6178"W	1.27
9842.00	89.880	145.490	7134.70	-272.53	2258.40	3021.88	1753706.17	14453464.01	39°47'53.1002"N	80°35'47.9556"W	1.21
9934.00	91.020	148.710	7133.98	-180.55	2181.17	3071.84	1753756.12	14453386.81	39°47'52.3347"N	80°35'47.3200"W	3.71
10027.00	88.770	145.470	7134.15	-87.56	2103.11	3122.36	1753806.62	14453308.78	39°47'51.5611"N	80°35'46.6772"W	4.24
10120.00	89.450	149.510	7135.59	5.40	2024.71	3172.32	1753856.56	14453230.41	39°47'50.7840"N	80°35'46.0416"W	4.40
10213.00	89.510	145.500	7136.44	98.38	1946.29	3222.27	1753906.49	14453152.02	39°47'50.0068"N	80°35'45.4062"W	4.31
10306.00	92.280	149.540	7134.98	191.34	1867.87	3272.20	1753956.40	14453073.63	39°47'49.2296"N	80°35'44.7712"W	5.27
10398.00	92.160	145.280	7131.42	283.25	1790.43	3321.70	1754005.88	14452996.22	39°47'48.4621"N	80°35'44.1414"W	4.63
10491.00	89.720	147.870	7129.89	376.21	1712.84	3372.91	1754057.07	14452918.65	39°47'47.6930"N	80°35'43.4898"W	3.83
10584.00	90.150	145.880	7130.00	469.21	1634.96	3423.73	1754107.87	14452840.80	39°47'46.9210"N	80°35'42.8432"W	2.19
10677.00	90.180	147.900	7129.73	562.20	1557.06	3474.53	1754158.65	14452762.94	39°47'46.1490"N	80°35'42.1970"W	2.17
10768.00	90.150	147.720	7129.47	653.19	1480.05	3523.01	1754207.11	14452685.96	39°47'45.3857"N	80°35'41.5803"W	0.20
10860.00	90.830	147.620	7128.68	745.19	1402.31	3572.21	1754256.29	14452608.25	39°47'44.6153"N	80°35'40.9545"W	0.75

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
10951.00	90.680	147.620	7127.48	836.18	1325.47	3620.94	1754305.00	14452531.44	39°47'43.8537"N	80°35'40.3347"W	0.16
11044.00	90.680	150.330	7126.38	929.13	1245.79	3668.86	1754352.91	14452451.78	39°47'43.0641"N	80°35'39.7253"W	2.91
11136.00	89.260	149.150	7126.42	1021.05	1166.33	3715.22	1754399.25	14452372.35	39°47'42.2767"N	80°35'39.1360"W	2.01
11228.00	92.370	151.490	7125.12	1112.90	1086.42	3760.76	1754444.77	14452292.48	39°47'41.4850"N	80°35'38.5572"W	4.23
11321.00	89.510	146.510	7123.59	1205.81	1006.75	3808.64	1754492.63	14452212.84	39°47'40.6955"N	80°35'37.9486"W	6.17
11411.00	91.260	151.210	7122.98	1295.75	929.74	3855.16	1754539.14	14452135.86	39°47'39.9324"N	80°35'37.3570"W	5.57
11503.00	89.940	146.390	7122.02	1387.68	851.08	3902.80	1754586.76	14452057.23	39°47'39.1529"N	80°35'36.7512"W	5.43
11596.00	91.140	149.480	7121.14	1480.66	772.28	3952.17	1754636.10	14451978.46	39°47'38.3719"N	80°35'36.1234"W	3.56
11689.00	90.740	149.630	7119.62	1573.58	692.12	3999.28	1754683.20	14451898.33	39°47'37.5776"N	80°35'35.5244"W	0.46
11781.00	90.340	149.040	7118.75	1665.52	612.99	4046.20	1754730.10	14451819.23	39°47'36.7935"N	80°35'34.9280"W	0.77
11873.00	91.540	148.750	7117.24	1757.48	534.22	4093.72	1754777.61	14451740.50	39°47'36.0130"N	80°35'34.3238"W	1.34
11966.00	91.260	149.430	7114.97	1850.41	454.46	4141.48	1754825.35	14451660.76	39°47'35.2225"N	80°35'33.7166"W	0.79
12056.00	90.400	150.760	7113.67	1940.29	376.45	4186.35	1754870.19	14451582.79	39°47'34.4496"N	80°35'33.1464"W	1.76
12145.00	91.760	147.180	7111.99	2029.22	300.21	4232.21	1754916.04	14451506.58	39°47'33.6941"N	80°35'32.5633"W	4.30
12237.00	90.310	150.370	7110.33	2121.17	221.57	4279.89	1754963.69	14451427.96	39°47'32.9147"N	80°35'31.9571"W	3.81
12328.00	90.400	148.860	7109.76	2212.09	143.07	4325.91	1755009.70	14451349.49	39°47'32.1369"N	80°35'31.3721"W	1.66
12421.00	91.720	148.640	7108.04	2305.05	63.58	4374.15	1755057.92	14451270.03	39°47'31.3492"N	80°35'30.7588"W	1.44
12513.00	91.660	150.140	7105.33	2396.95	-15.56	4420.97	1755104.73	14451190.92	39°47'30.5649"N	80°35'30.1635"W	1.63
12603.00	89.750	149.380	7104.22	2486.86	-93.31	4466.29	1755150.03	14451113.21	39°47'29.7946"N	80°35'29.5875"W	2.28
12696.00	91.260	147.620	7103.40	2579.83	-172.60	4514.88	1755198.60	14451033.95	39°47'29.0088"N	80°35'28.9697"W	2.49
12787.00	91.320	151.290	7101.35	2670.73	-250.93	4561.11	1755244.81	14450955.64	39°47'28.2325"N	80°35'28.3821"W	4.03
12880.00	92.000	147.120	7098.66	2763.62	-330.77	4608.69	1755292.37	14450875.84	39°47'27.4414"N	80°35'27.7772"W	4.54
12972.00	92.250	147.600	7095.24	2855.56	-408.19	4658.28	1755341.94	14450798.45	39°47'26.6741"N	80°35'27.1465"W	0.59
13063.00	91.510	147.660	7092.26	2946.51	-485.00	4706.97	1755390.61	14450721.66	39°47'25.9127"N	80°35'26.5272"W	0.82
13156.00	91.660	147.340	7089.69	3039.47	-563.41	4756.92	1755440.54	14450643.29	39°47'25.1356"N	80°35'25.8919"W	0.38
13245.00	91.570	147.650	7087.18	3128.44	-638.44	4804.73	1755488.33	14450568.29	39°47'24.3920"N	80°35'25.2839"W	0.36
13335.00	92.310	147.840	7084.13	3218.38	-714.50	4852.73	1755536.32	14450492.25	39°47'23.6381"N	80°35'24.6734"W	0.85
13427.00	91.690	147.740	7080.92	3310.33	-792.30	4901.74	1755585.31	14450414.49	39°47'22.8671"N	80°35'24.0502"W	0.68
13517.00	91.450	147.940	7078.46	3400.29	-868.46	4949.63	1755633.18	14450338.36	39°47'22.1122"N	80°35'23.4412"W	0.35
13609.00	91.850	147.870	7075.81	3492.25	-946.37	4998.49	1755682.02	14450260.48	39°47'21.3401"N	80°35'22.8198"W	0.44

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION			
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Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)											
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13700.00	89.780	147.030	7074.51	3583.23	-1023.06	5047.44	1755730.95	14450183.82	39°47'20.5799"N	80°35'22.1972"W	2.45
13790.00	89.540	147.720	7075.05	3673.23	-1098.86	5095.96	1755779.45	14450108.05	39°47'19.8287"N	80°35'21.5801"W	0.81
13882.00	89.350	146.550	7075.94	3765.22	-1176.13	5145.88	1755829.36	14450030.81	39°47'19.0628"N	80°35'20.9452"W	1.29
13973.00	87.290	147.600	7078.61	3856.18	-1252.47	5195.32	1755878.78	14449954.49	39°47'18.3060"N	80°35'20.3163"W	2.54
14063.00	90.400	147.100	7080.42	3946.15	-1328.23	5243.86	1755927.30	14449878.77	39°47'17.5552"N	80°35'19.6990"W	3.50
14153.00	89.970	148.140	7080.13	4036.14	-1404.23	5292.06	1755975.47	14449802.79	39°47'16.8019"N	80°35'19.0861"W	1.25
14246.00	89.850	147.430	7080.27	4129.14	-1482.91	5341.64	1756025.03	14449724.14	39°47'16.0221"N	80°35'18.4556"W	0.77
14337.00	89.690	147.260	7080.64	4220.14	-1559.53	5390.74	1756074.12	14449647.55	39°47'15.2627"N	80°35'17.8312"W	0.26
14428.00	89.660	147.090	7081.16	4311.14	-1636.00	5440.07	1756123.42	14449571.12	39°47'14.5047"N	80°35'17.2038"W	0.19
14520.00	89.750	147.330	7081.63	4403.14	-1713.34	5489.89	1756173.23	14449493.81	39°47'13.7381"N	80°35'16.5701"W	0.28
14611.00	89.140	147.450	7082.51	4494.13	-1789.99	5538.93	1756222.25	14449417.19	39°47'12.9784"N	80°35'15.9465"W	0.68
14703.00	89.850	147.450	7083.32	4586.13	-1867.53	5588.42	1756271.73	14449339.67	39°47'12.2098"N	80°35'15.3170"W	0.77
14794.00	89.510	147.260	7083.83	4677.12	-1944.16	5637.51	1756320.79	14449263.08	39°47'11.4503"N	80°35'14.6927"W	0.43
14886.00	89.230	148.220	7084.84	4769.12	-2021.95	5686.61	1756369.88	14449185.31	39°47'10.6793"N	80°35'14.0683"W	1.09
14977.00	89.420	148.020	7085.91	4860.10	-2099.22	5734.67	1756417.92	14449108.08	39°47'9.9135"N	80°35'13.4573"W	0.30
15067.00	89.660	147.980	7086.64	4950.09	-2175.54	5782.36	1756465.59	14449031.78	39°47'9.1571"N	80°35'12.8509"W	0.27
15159.00	90.280	147.280	7086.68	5042.09	-2253.24	5831.62	1756514.82	14448954.11	39°47'8.3869"N	80°35'12.2245"W	1.02
15249.00	90.340	146.510	7086.20	5132.09	-2328.63	5880.77	1756563.96	14448878.75	39°47'7.6397"N	80°35'11.5994"W	0.86
15341.00	90.460	146.590	7085.56	5224.07	-2405.39	5931.48	1756614.65	14448802.02	39°47'6.8788"N	80°35'10.9543"W	0.16
15432.00	91.320	148.240	7084.14	5315.06	-2482.06	5980.48	1756663.63	14448725.39	39°47'6.1189"N	80°35'10.3312"W	2.04
15522.00	89.820	147.970	7083.25	5405.05	-2558.46	6028.03	1756711.16	14448649.01	39°47'5.3616"N	80°35'9.7267"W	1.69
15614.00	89.630	147.490	7083.69	5497.04	-2636.25	6077.15	1756760.26	14448571.25	39°47'4.5906"N	80°35'9.1021"W	0.56
15706.00	90.030	147.590	7083.96	5589.04	-2713.88	6126.53	1756809.62	14448493.66	39°47'3.8212"N	80°35'8.4742"W	0.45
15799.00	90.000	146.480	7083.94	5682.04	-2791.90	6177.13	1756860.20	14448415.66	39°47'3.0478"N	80°35'7.8306"W	1.19
15890.00	91.760	147.530	7082.54	5773.02	-2868.21	6226.68	1756909.73	14448339.38	39°47'2.2914"N	80°35'7.2005"W	2.25
15982.00	89.880	147.340	7081.22	5865.01	-2945.74	6276.19	1756959.22	14448261.89	39°47'1.5230"N	80°35'6.5709"W	2.05
16072.00	89.970	146.920	7081.34	5955.51	-3021.33	6325.04	1757008.05	14448186.33	39°47'0.7737"N	80°35'5.9497"W	0.48
16163.00	90.280	146.600	7081.14	6046.00	-3097.44	6374.92	1757057.91	14448110.24	39°47'0.0193"N	80°35'5.3153"W	0.49
16255.00	90.220	150.150	7080.74	6136.97	-3175.76	6423.15	1757106.13	14448031.95	39°46'59.2430"N	80°35'4.7021"W	3.86
16345.00	89.540	145.290	7080.93	6227.95	-3254.05	6471.20	1757154.16	14447955.91	39°46'58.4891"N	80°35'4.0912"W	5.45

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Slot	810H		

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16437.00	90.400	147.130	7080.98	6319.92	-3328.28	6522.36	1757205.30	14447879.49	39°46'57.7312"N	80°35'3.4404"W	2.21
16527.00	89.540	147.490	7081.02	6409.92	-3404.03	6570.97	1757253.89	14447803.77	39°46'56.9804"N	80°35'2.8223"W	1.04
16619.00	90.000	146.690	7081.39	6501.91	-3481.26	6620.96	1757303.86	14447726.57	39°46'56.2148"N	80°35'2.1866"W	1.00
16712.00	90.770	147.370	7080.77	6594.91	-3559.28	6671.56	1757354.45	14447648.58	39°46'55.4415"N	80°35'1.5430"W	1.10
16802.00	90.180	147.030	7080.02	6684.90	-3634.93	6720.32	1757403.18	14447572.96	39°46'54.6916"N	80°35'0.9231"W	0.76
16896.00	89.660	146.940	7080.15	6778.90	-3713.75	6771.53	1757454.38	14447494.17	39°46'53.9103"N	80°35'0.2717"W	0.56
16990.00	89.720	147.120	7080.66	6872.90	-3792.61	6822.69	1757505.51	14447415.34	39°46'53.1286"N	80°34'59.6212"W	0.20
17085.00	90.000	147.340	7080.89	6967.90	-3872.49	6874.11	1757556.91	14447335.49	39°46'52.3368"N	80°34'58.9674"W	0.37
17180.00	89.600	147.690	7081.23	7062.90	-3952.63	6925.13	1757607.91	14447255.39	39°46'51.5425"N	80°34'58.3186"W	0.56
17274.00	89.780	147.740	7081.73	7156.89	-4032.09	6975.34	1757658.10	14447175.95	39°46'50.7549"N	80°34'57.6803"W	0.20
17368.00	89.720	147.220	7082.14	7250.89	-4111.35	7025.87	1757708.61	14447096.72	39°46'49.9693"N	80°34'57.0377"W	0.56
17461.00	89.350	147.000	7082.90	7343.89	-4189.45	7076.37	1757759.09	14447018.66	39°46'49.1952"N	80°34'56.3956"W	0.46
17556.00	89.380	147.520	7083.95	7438.88	-4269.35	7127.75	1757810.45	14446938.79	39°46'48.4032"N	80°34'55.7423"W	0.55
17650.00	88.520	147.330	7085.68	7532.87	-4348.55	7178.35	1757861.03	14446859.62	39°46'47.6182"N	80°34'55.0989"W	0.94
17745.00	88.580	147.340	7088.08	7627.83	-4428.50	7229.60	1757912.27	14446779.70	39°46'46.8257"N	80°34'54.4472"W	0.06
17839.00	87.410	147.700	7091.37	7721.78	-4507.74	7280.05	1757962.69	14446700.49	39°46'46.0402"N	80°34'53.8058"W	1.30
17933.00	87.440	147.370	7095.59	7815.68	-4586.97	7330.46	1758013.08	14446621.29	39°46'45.2549"N	80°34'53.1649"W	0.35
18027.00	88.250	147.600	7099.13	7909.61	-4666.18	7380.95	1758063.55	14446542.11	39°46'44.4698"N	80°34'52.5229"W	0.90
18121.00	88.580	146.930	7101.73	8003.58	-4745.22	7431.76	1758114.34	14446463.10	39°46'43.6863"N	80°34'51.8769"W	0.79
18216.00	88.980	148.660	7103.75	8098.55	-4825.58	7482.38	1758164.94	14446382.77	39°46'42.8898"N	80°34'51.2334"W	1.87
18311.00	88.740	148.420	7105.64	8193.51	-4906.60	7531.95	1758214.49	14446301.78	39°46'42.0868"N	80°34'50.6033"W	0.36
18406.00	88.740	148.400	7107.73	8288.47	-4987.51	7581.70	1758264.23	14446220.91	39°46'41.2850"N	80°34'49.9709"W	0.02
18500.00	89.080	148.490	7109.52	8382.44	-5067.59	7630.88	1758313.39	14446140.85	39°46'40.4912"N	80°34'49.3458"W	0.37
18595.00	88.650	148.320	7111.40	8477.40	-5148.49	7680.64	1758363.13	14446059.98	39°46'39.6894"N	80°34'48.7133"W	0.49
18689.00	89.110	148.460	7113.23	8571.37	-5228.53	7729.90	1758412.37	14445979.98	39°46'38.8961"N	80°34'48.0872"W	0.51
18784.00	88.680	147.790	7115.07	8666.34	-5309.19	7780.06	1758462.51	14445899.35	39°46'38.0967"N	80°34'47.4496"W	0.84
18879.00	88.120	147.630	7117.72	8761.90	-5389.47	7830.79	1758513.22	14445819.10	39°46'37.3010"N	80°34'46.8047"W	0.61
18973.00	88.000	148.670	7120.90	8855.44	-5469.77	7880.36	1758562.77	14445739.33	39°46'36.5101"N	80°34'46.1746"W	1.11
19068.00	88.090	148.380	7124.14	8950.16	-5550.24	7929.94	1758612.33	14445658.39	39°46'35.7075"N	80°34'45.5445"W	0.32
19162.00	88.250	148.040	7127.14	9044.71	-5630.51	7979.43	1758661.80	14445578.56	39°46'34.9160"N	80°34'44.9154"W	0.40

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
19256.00	88.000	148.080	7130.22	9138.05	-5709.83	8029.13	1758711.49	14445498.87	39°46'34.1258"N	80°34'44.2836"W	0.27
19350.00	88.180	148.410	7133.35	9231.99	-5789.71	8078.58	1758760.91	14445419.02	39°46'33.3341"N	80°34'43.6552"W	0.40
19445.00	88.280	148.190	7136.29	9326.93	-5870.50	8128.47	1758810.79	14445338.26	39°46'32.5334"N	80°34'43.0210"W	0.25
19540.00	89.010	147.530	7138.53	9421.90	-5950.92	8179.00	1758861.29	14445257.87	39°46'31.7363"N	80°34'42.3788"W	1.04
19634.00	88.090	145.850	7140.91	9515.86	-6029.45	8230.60	1758912.88	14445179.37	39°46'30.9578"N	80°34'41.7226"W	2.04
19729.00	89.320	148.950	7143.06	9610.82	-6109.45	8281.76	1758964.02	14445099.40	39°46'30.1648"N	80°34'41.0722"W	3.51
19823.00	87.810	148.510	7145.41	9704.76	-6189.76	8330.54	1759012.77	14445019.12	39°46'29.3688"N	80°34'40.4523"W	1.67
19918.00	88.150	148.780	7148.76	9799.68	-6270.84	8379.94	1759062.16	14444938.07	39°46'28.5653"N	80°34'39.8245"W	0.46
20013.00	88.460	148.600	7151.57	9894.61	-6351.97	8429.29	1759111.48	14444856.98	39°46'27.7612"N	80°34'39.1974"W	0.38
20106.00	87.810	148.250	7154.60	9987.54	-6431.16	8477.96	1759160.14	14444777.82	39°46'26.9763"N	80°34'38.5788"W	0.79
20201.00	88.460	147.780	7157.69	10082.49	-6511.69	8528.25	1759210.41	14444697.31	39°46'26.1781"N	80°34'37.9396"W	0.84
20296.00	88.490	148.540	7160.22	10177.44	-6592.37	8578.35	1759260.49	14444616.67	39°46'25.3785"N	80°34'37.3028"W	0.80
20390.00	88.180	148.770	7162.95	10271.38	-6672.61	8627.23	1759309.35	14444536.45	39°46'24.5831"N	80°34'36.6817"W	0.41
20484.00	88.220	148.530	7165.90	10365.31	-6752.85	8676.11	1759358.21	14444456.25	39°46'23.7879"N	80°34'36.0605"W	0.26
20579.00	88.280	148.720	7168.80	10460.24	-6833.92	8725.54	1759407.63	14444375.21	39°46'22.9844"N	80°34'35.4323"W	0.21
20674.00	88.060	148.260	7171.84	10555.18	-6914.87	8775.17	1759457.23	14444294.29	39°46'22.1821"N	80°34'34.8016"W	0.54
20768.00	88.120	148.410	7174.97	10649.11	-6994.84	8824.49	1759506.53	14444214.36	39°46'21.3896"N	80°34'34.1748"W	0.17
20863.00	88.430	148.200	7177.83	10744.05	-7075.63	8874.38	1759556.40	14444133.60	39°46'20.5888"N	80°34'33.5408"W	0.39
20957.00	88.280	148.440	7180.53	10838.00	-7155.59	8923.72	1759605.73	14444053.67	39°46'19.7962"N	80°34'32.9137"W	0.30
21052.00	88.150	148.480	7183.49	10932.94	-7236.52	8973.39	1759655.38	14443972.77	39°46'18.9941"N	80°34'32.2825"W	0.14
21147.00	87.750	148.300	7186.89	11027.86	-7317.37	9023.15	1759705.12	14443891.95	39°46'18.1928"N	80°34'31.6501"W	0.46
21241.00	88.150	148.480	7190.25	11121.79	-7397.37	9072.39	1759754.34	14443811.98	39°46'17.3998"N	80°34'31.0244"W	0.47
21335.00	87.880	149.460	7193.51	11215.69	-7477.87	9120.82	1759802.75	14443731.51	39°46'16.6020"N	80°34'30.4091"W	1.08
21429.00	87.910	148.980	7196.96	11309.58	-7558.58	9168.89	1759850.80	14443650.84	39°46'15.8022"N	80°34'29.7983"W	0.51
21523.00	87.690	148.550	7200.57	11403.48	-7638.89	9217.60	1759899.49	14443570.55	39°46'15.0062"N	80°34'29.1794"W	0.51
21617.00	87.820	148.460	7204.22	11497.39	-7718.98	9266.67	1759948.54	14443490.49	39°46'14.2124"N	80°34'28.5559"W	0.17
21712.00	87.750	148.430	7207.96	11592.30	-7799.87	9316.34	1759998.20	14443409.63	39°46'13.4106"N	80°34'27.9246"W	0.08
21807.00	87.440	148.850	7211.95	11687.20	-7880.92	9365.74	1760047.58	14443328.61	39°46'12.6073"N	80°34'27.2969"W	0.55
21901.00	87.540	147.820	7216.96	11781.99	-7960.85	9415.04	1760096.85	14443248.72	39°46'11.8151"N	80°34'26.6705"W	1.10
21995.00	88.090	148.240	7219.95	11875.97	-8040.54	9464.77	1760146.57	14443169.06	39°46'11.0253"N	80°34'26.0384"W	0.74

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Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
22090.00	87.810	148.780	7223.01	11969.94	-8121.49	9514.36	1760196.14	14443088.14	39°46'10.2229"N	80°34'25.4082"W	0.64
22184.00	87.970	147.930	7226.47	12063.86	-8201.46	9563.65	1760245.41	14443008.20	39°46'9.4303"N	80°34'24.7820"W	0.92
22279.00	87.850	147.980	7229.93	12158.79	-8281.93	9614.02	1760295.76	14442927.76	39°46'8.6326"N	80°34'24.1418"W	0.14
22373.00	88.120	147.500	7233.24	12252.73	-8361.37	9664.16	1760345.88	14442848.35	39°46'7.8452"N	80°34'23.5045"W	0.59
22467.00	88.280	147.320	7236.19	12346.68	-8440.54	9714.77	1760396.47	14442769.22	39°46'7.0605"N	80°34'22.8612"W	0.26
22562.00	88.400	147.270	7238.94	12441.64	-8520.44	9766.08	1760447.76	14442689.35	39°46'6.2684"N	80°34'22.2090"W	0.14
22656.00	88.460	147.540	7241.52	12535.61	-8599.61	9816.69	1760498.35	14442610.21	39°46'5.4837"N	80°34'21.5656"W	0.29
22751.00	88.280	147.330	7244.22	12630.57	-8679.64	9867.81	1760549.45	14442530.21	39°46'4.6904"N	80°34'20.9160"W	0.29
22846.00	88.000	146.770	7247.30	12725.52	-8759.31	9919.45	1760601.07	14442450.57	39°46'3.9005"N	80°34'20.2595"W	0.66
22940.00	89.850	148.140	7249.07	12819.50	-8838.53	9970.01	1760651.61	14442371.38	39°46'3.1152"N	80°34'19.6169"W	2.45
23034.00	88.830	147.270	7250.15	12913.49	-8917.99	10020.22	1760701.81	14442291.95	39°46'2.3277"N	80°34'18.9787"W	1.43
23129.00	88.710	147.550	7252.19	13008.46	-8998.01	10071.38	1760752.94	14442211.96	39°46'1.5344"N	80°34'18.3284"W	0.32
23223.00	88.920	147.600	7254.13	13102.44	-9077.34	10121.77	1760803.32	14442132.67	39°46'0.7481"N	80°34'17.6880"W	0.23
23318.00	88.550	147.620	7256.23	13197.42	-9157.54	10172.65	1760854.17	14442052.50	39°45'59.9531"N	80°34'17.0414"W	0.39
23412.00	88.980	147.420	7258.25	13291.40	-9236.82	10223.12	1760904.62	14441973.25	39°45'59.1672"N	80°34'16.3999"W	0.50
23507.00	88.680	147.400	7260.19	13386.38	-9316.84	10274.28	1760955.76	14441893.26	39°45'58.3739"N	80°34'15.7497"W	0.32
23601.00	88.580	147.670	7262.44	13480.35	-9396.13	10324.72	1761006.18	14441814.00	39°45'57.5880"N	80°34'15.1086"W	0.31
23696.00	88.120	147.630	7265.18	13575.31	-9476.35	10375.53	1761056.97	14441733.81	39°45'56.7928"N	80°34'14.4628"W	0.49
23790.00	88.090	146.590	7268.29	13669.25	-9555.24	10426.55	1761107.97	14441654.95	39°45'56.0107"N	80°34'13.8144"W	1.11
23884.00	88.060	147.420	7271.44	13763.20	-9634.03	10477.71	1761159.11	14441576.19	39°45'55.2296"N	80°34'13.1641"W	0.88
23978.00	88.150	147.310	7274.55	13857.15	-9713.15	10528.37	1761209.76	14441497.10	39°45'54.4454"N	80°34'12.5201"W	0.15
24072.00	88.280	147.430	7277.48	13951.10	-9792.27	10579.03	1761260.40	14441418.01	39°45'53.6610"N	80°34'11.8763"W	0.19
24167.00	88.250	147.650	7280.36	14046.06	-9872.40	10630.00	1761311.34	14441337.92	39°45'52.8668"N	80°34'11.2286"W	0.23
24261.00	88.250	147.410	7283.23	14140.01	-9951.66	10680.44	1761361.76	14441258.68	39°45'52.0810"N	80°34'10.5875"W	0.26
24355.00	88.060	145.530	7286.25	14233.95	-10029.98	10732.33	1761413.64	14441180.39	39°45'51.3046"N	80°34'9.9278"W	2.01
24450.00	87.630	142.970	7289.83	14328.73	-10107.02	10787.79	1761469.08	14441103.39	39°45'50.5406"N	80°34'9.2224"W	2.73
24544.00	87.720	143.730	7293.64	14422.42	-10182.37	10843.86	1761525.12	14441028.06	39°45'49.7933"N	80°34'8.5091"W	0.81
24639.00	87.750	143.320	7297.39	14517.14	-10258.70	10900.29	1761581.53	14440951.76	39°45'49.0362"N	80°34'7.7912"W	0.43
24734.00	88.150	143.430	7300.79	14611.84	-10334.89	10956.93	1761638.14	14440875.60	39°45'48.2805"N	80°34'7.0706"W	0.44
24828.00	88.240	143.570	7303.75	14705.58	-10410.42	11012.81	1761694.01	14440800.10	39°45'47.5315"N	80°34'6.3596"W	0.18



Actual Wellpath Report

Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

WELLPATH DATA (288 stations) † = interpolated, ‡ = extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]
24923.00	88.770	143.230	7306.23	14800.32	-10486.66	11069.43	1761750.61	14440723.89	39°45'46.7753"N	80°34'5.6392"W	0.66
25018.00	88.550	143.260	7308.45	14895.05	-10562.75	11126.26	1761807.42	14440647.83	39°45'46.0206"N	80°34'4.9162"W	0.23
25112.00	88.580	142.930	7310.81	14988.76	-10637.90	11182.69	1761863.82	14440572.71	39°45'45.2754"N	80°34'4.1983"W	0.35
25207.00	89.110	143.630	7312.72	15083.50	-10714.03	11239.48	1761920.59	14440496.61	39°45'44.5203"N	80°34'3.4758"W	0.92
25301.00	89.080	143.530	7314.21	15177.28	-10789.66	11295.28	1761976.37	14440421.01	39°45'43.7702"N	80°34'2.7659"W	0.11
25396.00	88.650	143.240	7316.09	15272.03	-10865.90	11351.93	1762033.00	14440344.80	39°45'43.0140"N	80°34'2.0452"W	0.55
25502.00	88.980	143.500	7318.28	15377.75	-10950.94	11415.16	1762096.20	14440259.79	39°45'42.1705"N	80°34'1.2408"W	0.40
25596.00	88.890	144.060	7320.03	15471.55	-11026.77	11470.70	1762151.71	14440183.99	39°45'41.4186"N	80°34'0.5344"W	0.60
25691.00	88.860	143.930	7321.89	15566.37	-11103.60	11526.53	1762207.53	14440107.19	39°45'40.6565"N	80°33'59.8242"W	0.14
25785.00	88.950	143.930	7323.69	15660.18	-11179.57	11581.87	1762262.84	14440031.25	39°45'39.9032"N	80°33'59.1203"W	0.10
25880.00	88.950	143.970	7325.43	15754.99	-11256.36	11637.76	1762318.72	14439954.48	39°45'39.1416"N	80°33'58.4093"W	0.04
25974.00	89.540	142.930	7326.67	15848.76	-11331.87	11693.74	1762374.67	14439879.01	39°45'38.3927"N	80°33'57.6973"W	1.27
26069.00	89.480	142.990	7327.48	15943.48	-11407.70	11750.96	1762431.87	14439803.21	39°45'37.6406"N	80°33'56.9692"W	0.09
26163.00	89.540	143.090	7328.29	16037.21	-11482.81	11807.48	1762488.36	14439728.13	39°45'36.8956"N	80°33'56.2502"W	0.12
26258.00	89.510	143.060	7329.07	16131.94	-11558.75	11864.55	1762545.41	14439652.22	39°45'36.1424"N	80°33'55.5242"W	0.04
26353.00	89.350	142.980	7330.02	16226.66	-11634.63	11921.69	1762602.53	14439576.36	39°45'35.3897"N	80°33'54.7972"W	0.19
26385.00	89.510	142.640	7330.34	16258.56	-11660.13	11941.03	1762621.87	14439550.88	39°45'35.1368"N	80°33'54.5511"W	1.17
26410.00‡	89.510	142.640	7330.55	16283.47	-11680.00	11956.20	1762637.03	14439531.02	39°45'34.9397"N	80°33'54.3581"W	0.00

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 810H
Field	Marshall WV	API	47051024270000
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 810H AWB
Slot	810H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Charles Jamison MSH 810H LP Rev 5	7149.00	3006.15	2543.85	1753228.34	14454211.47	39°48'0.5111"N	80°35'54.0370"W	point
Charles Jamison MSH 810H BHL Rev 4	7379.00	-11684.14	11950.16	1762630.99	14439526.88	39°45'34.8991"N	80°33'54.4357"W	point

WELLPATH COMPOSITION - Ref Wellbore: Charles Jamison MSH 810H AWB Ref Wellpath: Charles Jamison MSH 810H awp 100' - 24734' Proj: 26410'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	944.00	Gyrodatta 2015 - GC+WIR+DPIPE	1 Gyro 100' - 944'	Charles Jamison MSH 810H AWB	5/16/2022
944.00	2748.00	OWSG MWD rev2 + HRGM	2 Tally MWD 1053' - 2748'	Charles Jamison MSH 810H AWB	5/16/2022
2748.00	4090.00	OWSG MWD rev2 + HRGM	3 Tally MWD 2899' - 4090'	Charles Jamison MSH 810H AWB	5/16/2022
4090.00	24639.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	4 BH MWD 4183' - 24639'	Charles Jamison MSH 810H AWB	5/16/2022
24639.00	26410.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	5 BH MWD 24734' - 26385'	Charles Jamison MSH 810H AWB	6/6/2022